L8 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2002:183809 CAPLUS
DN 136:233662
TI Coating compositions for heat-reflective, superphobic coatings
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SO Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C09D183-04
ICS C09D183-08; C09D183-14; C09D183-10; C04B041-49
CC 42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1186640	A2	20020313	EP 2001-119527	20010814 <--
EP 1186640	A3	20030326		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 10044216	A1	20020502	DE 2000-10044216	20000907
US 2002123561	A1	20020905	US 2001-946961	20010906
PRAI DE 2000-10044216	A	20000907		

AB The title compns., giving films which are hydrophobic, oleophobic, and heat-reflective, contain hydrolyzable hydrocarbylsilanes or their hydrolytic condensates, IR-reflective pigments with particle size 1-50 .mu.m, and solvents and/or dispersing media; the pigments either being present in amts. giving films which are opaque to visible light or other materials giving such opacity being used. A mixt. of 3-(diethoxymethylsilyl)propylamine 1.91, (EtO)4Si 0.208, and H2O 10 g was pre-hydrolyzed for 20 min, mixed with poly(acrylic acid) 0.5, Ti(OEt)4 0.22, Et acetoacetate 0.52, and pigment (Paliochrom R2/237) 0.93 g, and coated (80 .mu.m) on a substrate to give a film which dried tack-free within 1 h and had a contact angle vs. H2O of 82.degree..

ST coating heat reflective superphobic; polysiloxane coating heat reflective; polyacrylic acid coating heat reflective; pigment IR reflective coating; amine silylalkyl hydrolyzate coating; oleophobic coating heat reflective; hydrophobic coating heat reflective

IT Pigments, nonbiological
(IR-reflective; coating compns. for heat-reflective, superphobic coatings)

IT Thermal insulators
(coating compns. for heat-reflective, superphobic coatings)

IT Coating materials
(heat-reflective; coating compns. for heat-reflective, superphobic coatings)

IT Silanes
RL: TEM (Technical or engineered material use); USES (Uses)
(hydrolyzates; coating compns. for heat-reflective, superphobic coatings)

IT Polyvinyl butyrals
RL: TEM (Technical or engineered material use); USES (Uses)
(silanized; coating compns. for heat-reflective, superphobic coatings)

IT 77-58-7, Dibutyltin dilaurate 78-10-4D, Tetraethyl silicate, hydrolyzates 546-68-9, Tetraisopropyl titanate 919-30-2D, hydrolyzates 1112-39-6D, Dimethoxydimethylsilane, hydrolyzates 2530-85-0D, hydrolyzates 3087-36-3, Tetraethyl titanate 3179-76-8D, 3-(Diethoxymethylsilyl)propylamine, hydrolyzates 7439-92-1D, Lead, lead 7440-56-4D, Germanium, tetraalkoxides 7440-67-7D, Zirconium, tetraalkoxides 9002-89-5 9002-89-5D, reaction products with

(triethoxysilyl)propyl isocyanate 9003-01-4, Poly(acrylic acid) 24801-88-5D, 3-(Triethoxysilyl)propyl isocyanate, reaction products with poly(vinyl alc.) 25119-62-4D, Allyl alcohol-styrene copolymer, reaction products with (triethoxysilyl)propyl isocyanate 51851-37-7D, hydrolyzates 93642-68-3D, reaction products with poly(vinyl alc.)
RL: TEM (Technical or engineered material use); USES (Uses)
(coating compns. for heat-reflective, superphobic coatings)

RN 77-58-7
RN 78-10-4D
RN 546-68-9
RN 919-30-2D
RN 1112-39-6D
RN 2530-85-0D
RN 3087-36-3
RN 3179-76-8D
RN 7439-92-1D
RN 7440-56-4D
RN 7440-67-7D
RN 9002-89-5
RN 9002-89-5D
RN 9003-01-4
RN 24801-88-5D
RN 25119-62-4D
RN 51851-37-7D
RN 93642-68-3D

L8 ANSWER 2 OF 2 WPIDS (C) 2003 THOMSON DERWENT
AN 2002-481354 [52] WPIDS
DNC C2002-136973
TI Oil- and water-repellent coating composition containing IR-reflecting pigment of specified particle size and a silane (or condensate) is compounded so as to be impermeable to visible-range light.
DC A13 A14 A82 E11 E12 G02
IN HAAS, K; HEINRICH, M; KOEHL, M; ROSE, K; KOHL, M
PA (FRAU) FRAUNHOFER GES FOERDERUNG ANGEWANDTEN; (HAAS-I) HAAS K; (HEIN-I) HEINRICH M; (KOHL-I) KOHL M; (ROSE-I) ROSE K
CYC 27
PI EP 1186640 A2 20020313 (200252)* DE 14p C09D183-04 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
DE 10044216 A1 20020502 (200252) C09D005-33
US 2002123561 A1 20020905 (200260) C08J003-00
ADT EP 1186640 A2 EP 2001-119527 20010814; DE 10044216 A1 DE 2000-10044216 20000907; US 2002123561 A1 US 2001-946961 20010906
PRAI DE 2000-10044216 20000907
IC ICM C08J003-00; C09D005-33; C09D183-04
ICS C04B041-49; C08K003-08; C08K003-10; C09D129-14; C09D183-08; C09D183-10; C09D183-14
AB EP 1186640 A UPAB: 20020815
NOVELTY - A coating composition comprises:
(a) a silane or its (partial) condensate;
(b) an IR-reflecting pigment mainly of particle size 1-50 mu ; and
(c) a solvent and dispersant and is such that (i) the pigment amount makes the coating impermeable to visible-range light and (ii) a further component produces such impermeability.
DETAILED DESCRIPTION - A coating composition comprises:
(a) a silane of formula (I) or its (partial) condensate;
(b) an IR-reflecting pigment mainly of particle size 1-50 mu ; and
(c) a solvent and dispersant and is such that (i) the pigment amount makes the coating impermeable to visible-range light and (ii) a further component produces such impermeability.
XaRbSiR14-a-b (I)

X = a hydrolysable group;
R = optionally substituted alkyl, alkenyl, aryl, alkaryl or aralkyl;
R1 = an organic residue linked to the Si atom via C and containing a reactive group;
a = 1, 2 or 3;
b = 0, 1 or 2.

USE - As an oil- and water-repellent (i.e. self-cleaning) paint for internal or fade use.

ADVANTAGE - The coating combines outstandingly high oleo- and hydrophobicity with heat-reflecting properties while being workable by wet lacquer technologies and self-hardening. Further, it can contain little or no solvent and can be viscosity-adjusted with water.

Dwg.0/1

FS CPI

FA AB; GI; DCN

MC CPI: A06-A00E1; A08-E02; A08-M06; A12-B01C; E05-E; E31-M; E33-B; E34-B01; E34-D02; E34-D03; E35-A; E35-C; E35-J; E35-K02; G02-A01A

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